

GA-6UASL3

LGA1155 socket motherboard for Intel® Core™ i3 processors/
Intel® E3® series processors

User's Manual

Rev. 2101

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Documentation Classifications

In order to assist in the use of this product, GIGABYTE provides the following types of documentations:

- For quick set-up of the product, read the Quick Installation Guide included with the product.
- For detailed product information, carefully read the User's Manual.

For product-related information, check on our website at:

<http://www.gigabyte.com>

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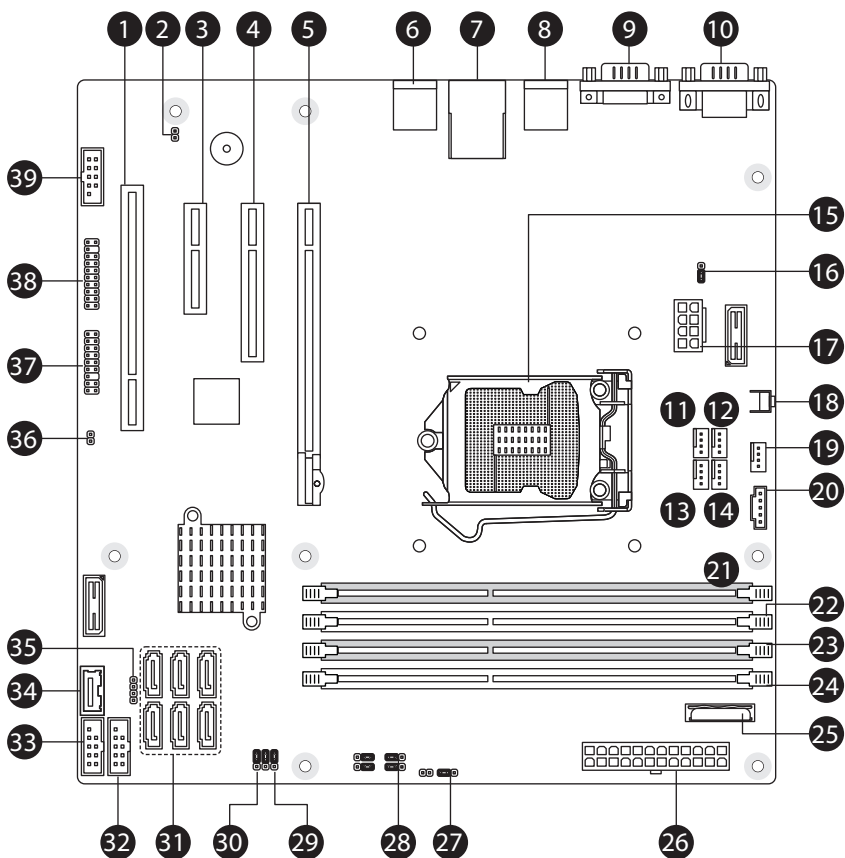
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Box Contents

- ☒ GA-6UASL3 motherboard
- ☒ Driver CD
- ☒ Two SATA cables
- ☒ I/O Shield

- The box contents above are for reference only and the actual items shall depend on the product package you obtain.
The box contents are subject to change without notice.
- The motherboard image is for reference only.

GA-6UASL3 Motherboard Layout



Item	Code	Description
1	PCI	PCI slot (32bit/33MHz)
2	CASE_OPEN1	Case open intrusion connector
3	PCIE3	PCI-E slot 3 (x4 slot)
4	PCIE2	PCI-E slot 2 (x8 slot)
5	PCIE1	PCI-E slot 1 (x16 slot)
6	R_USB1	Rear USB connector
7	USB_LANA1	USB connectors and LAN connector
8	USB_LANB1	USB connectors
9	VGA1	VGA port
10	COM1	Serial port
11	SYS_FAN1	System fan connector
12	SYS_FAN2	System fan connector
13	SYS_FAN3	System fan connector
14	SYS_FAN4	System fan connector
15	CPU1	Intel LGA1155 socket
16	VBoot_SEL	Vcore voltage test jumper
17	P2_CPU1	4 pin power connector
18	NMI_BTN1	NMI button
19	CPU_FAN	CPU fan connector
20	PWR_DET1	Power management connector
21	DIMM1B	DIMM slot (channel B-1)
22	DIMM1A	DIMM slot (channel A-1)
23	DIMM2B	DIMM slot (channel B-2)
24	DIMM2A	DIMM slot (channel A-2)
25	BAT1	Battery socket
26	P1	24 pin power connector
27	ME_F_JP1	ME recovery jumper
28	BIOS_JP1	BIOS recovery jumper
29	PWD_JP1	Skip supervisor password jumper
30	CLR_CMOS1	Clear CMOS jumper
31	SATA0~5	SATA cable connectors
32	USB1	USB connector
33	USB2	USB connector
34	USB_A1	Type A USB connector
35	SGPIO1	SGPIO connector
36	HDD_LED1	HDD LED
37	F_PANEL2	Front panel cable connector
38	TPM_1	TPM connector
39	COM2	Serial cable connector










Chapter 1 Hardware Installation







1-1 Installation Precautions

The motherboard contains numerous delicate electronic circuits and components which can become damaged as a result of electrostatic discharge (ESD). Prior to installation, carefully read the user's manual and follow these procedures:

- Prior to installation, do not remove or break motherboard S/N (Serial Number) sticker or warranty sticker provided by your dealer. These stickers are required for warranty validation.
- Always remove the AC power by unplugging the power cord from the power outlet before installing or removing the motherboard or other hardware components.
- When connecting hardware components to the internal connectors on the motherboard, make sure they are connected tightly and securely.
- When handling the motherboard, avoid touching any metal leads or connectors.
- It is best to wear an electrostatic discharge (ESD) wrist strap when handling electronic components such as a motherboard, CPU or memory. If you do not have an ESD wrist strap, keep your hands dry and first touch a metal object to eliminate static electricity.
- Prior to installing the motherboard, please have it on top of an antistatic pad or within an electrostatic shielding container.
- Before unplugging the power supply cable from the motherboard, make sure the power supply has been turned off.
- Before turning on the power, make sure the power supply voltage has been set according to the local voltage standard.
- Before using the product, please verify that all cables and power connectors of your hardware components are connected.
- To prevent damage to the motherboard, do not allow screws to come in contact with the motherboard circuit or its components.
- Make sure there are no leftover screws or metal components placed on the motherboard or within the computer casing.
- Do not place the computer system on an uneven surface.
- Do not place the computer system in a high-temperature environment.
- Turning on the computer power during the installation process can lead to damage to system components as well as physical harm to the user.
- If you are uncertain about any installation steps or have a problem related to the use of the product, please consult a certified computer technician.

1-2 Product Specifications

 CPU	<ul style="list-style-type: none"> Support for Intel® Core™ i3 processors/Intel® Xeon® E3 series processors in the LGA1155 package L3 cache varies with CPU
 Chipset	<ul style="list-style-type: none"> Intel® BD82C202 (Cougar Point) PCH
 Memory	<ul style="list-style-type: none"> 4 x 1.5V DDR3 DIMM sockets supporting up to 32 GB of system memory <ul style="list-style-type: none"> * Due to Windows 32-bit operating system limitation, when more than 4 GB of physical memory is installed, the actual memory size displayed will be less than 4 GB. Dual channel memory architecture Support for DDR3 1333/1066 MHz memory modules Support for ECC memory modules
 Audio (optional)	<ul style="list-style-type: none"> Realtek ALC662 codec High Definition Audio 2/4/5.1-channel
 LAN	<ul style="list-style-type: none"> 1 x Intel® 82579LM supports 10/100/1000 Mbps 1 x Intel® 82574L supports 10/100/1000 Mbps (Optional/GA-6UASL2) 2 x Intel® 82574L supports 10/100/1000 Mbps (Optional/GA-6UASL3)
 Expansion Slots	<ul style="list-style-type: none"> 1 x PCI Express x16 slot, running at x16 (PCI-E1) <ul style="list-style-type: none"> * For optimum performance, if only one PCI Express graphics card is to be installed, be sure to install it in the PCI-E16 slot. 1 x PCI Express x8 slot, running at x8 (PCI-E2) 1 x PCI Express x4 slots (All PCI Express slots conform to PCI Express 2.0 standard.) 1 x PCI slot
 Onboard Graphics	<ul style="list-style-type: none"> XGI Z9s supports 64MB VRAM
 Storage Interface	<ul style="list-style-type: none"> 6 x SATA 3Gb/s connectors Support for Intel IRST SATA RAID 0, RAID 1, RAID 5, RAID 10
 USB	<ul style="list-style-type: none"> Up to 10 USB 2.0/1.1 ports (6 on the back panel, 3 via the USB brackets connected to the internal USB headers/GA-6UASL1) 1 x Type A USB connector

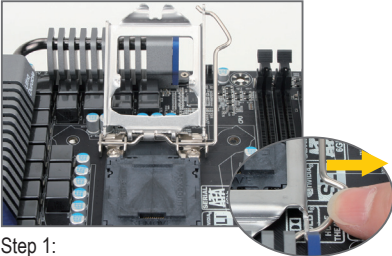
	Internal Connectors	<ul style="list-style-type: none"> ♦ 1 x 24-pin ATX main power connector ♦ 1 x 8-pin ATX 12V power connector ♦ 6 x SATA 3Gb/s connectors ♦ 1 x CPU fan header ♦ 4 x System fan headers ♦ 1 x NMI switch ♦ 1 x Front panel header ♦ 2 x USB 2.0/1.1 headers ♦ 1 x A type USB connector ♦ 1 x Serial port header
	Back Panel Connectors	<ul style="list-style-type: none"> ♦ 6 x USB 2.0/1.1 ports ♦ 2 x RJ-45 port ♦ 1 x COM port ♦ 1x VGA port
	I/O Controller	<ul style="list-style-type: none"> ♦ iTE IT8728 chip
	Hardware Monitor	<ul style="list-style-type: none"> ♦ System voltage detection ♦ CPU/System temperature detection ♦ CPU/System/Power fan speed detection ♦ CPU overheating warning ♦ CPU/System/Power fan fail warning ♦ CPU/System fan speed control <ul style="list-style-type: none"> * Whether the CPU/system fan speed control function is supported will depend on the CPU/system cooler you install.
	BIOS	<ul style="list-style-type: none"> ♦ 1 x 64 Mbit flash ♦ AMI BIOS
	Form Factor	<ul style="list-style-type: none"> ♦ Micro ATX Form Factor; 9.6 inch x 9.6 inch

* GIGABYTE reserves the right to make any changes to the product specifications and product-related information without prior notice.

B. Follow the steps below to correctly install the CPU into the motherboard CPU socket.

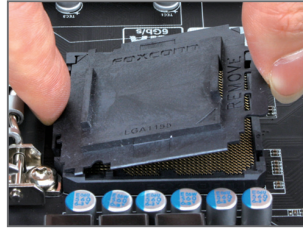


Before installing the CPU, make sure to turn off the computer and unplug the power cord from the power outlet power plug to prevent any damage to the CPU.



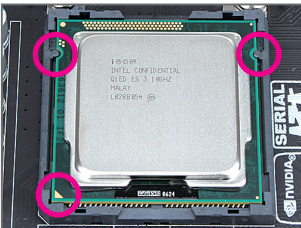
Step 1:

Gently press the CPU socket lever handle down and away from the socket with your finger. Then completely lift the CPU socket lever and the metal load plate will be lifted as well.



Step 2:

Remove the CPU socket cover as shown. Hold your index finger down on the rear grip of the socket cover and use your thumb to lift up the front edge (next to the "REMOVE" mark) and then remove the cover. (DO NOT touch socket contacts. To protect the CPU socket, always replace the protective socket cover when the CPU is not installed.)



Step 3:

Hold the CPU with your thumb and index fingers. Align the CPU pin one marking (triangle) with the pin one corner of the CPU socket (or you may align the CPU notches with the socket alignment keys) and gently insert the CPU into position.



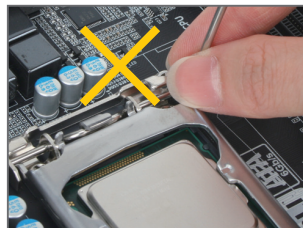
Step 4:

Once the CPU is properly inserted, use one hand to hold the socket lever and use the other to lightly replace the load plate. When replacing the load plate, make sure the front end of the load plate is under the shoulder screw.



Step 5:

Push the CPU socket lever back into its locked position.



NOTE:

Hold the CPU socket lever by the handle, not the lever base portion.

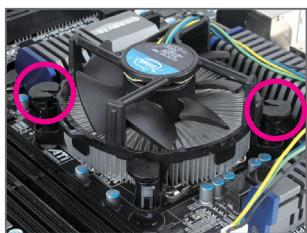
1-3-2 Installing the CPU Cooler

Follow the steps below to correctly install the CPU cooler on the motherboard. (The following procedure uses Intel® boxed cooler as the example cooler.)



Step 1:

Apply an even and thin layer of thermal paste on the surface of the installed CPU.



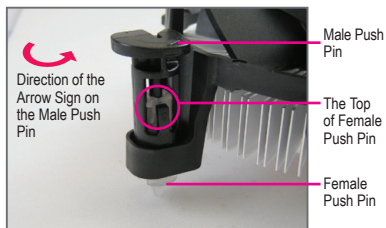
Step 3:

Place the cooler atop the CPU, aligning the four push pins through the pin holes on the motherboard. Push down on the push pins diagonally.




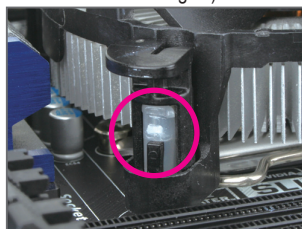
Step 5:

After the installation, check the back of the motherboard. If the push pin is inserted as the picture above shows, the installation is complete.



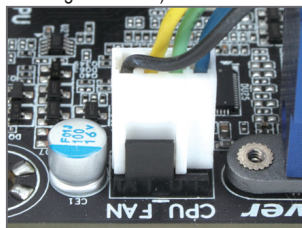
Step 2:

Before installing the cooler, note the direction of the arrow sign  on the male push pin. (Turning the push pin along the direction of the arrow is for removing the cooler, and the opposite direction is for installing it..)



Step 4:

You should hear a "click" when pushing down each push pin. Check that the Male and Female push pins are joined closely. (Refer to your CPU cooler installation manual for instructions on installing the cooler.)



Step 6:

Finally, attach the power connector of the CPU cooler to the CPU fan header (CPU_FAN) on the motherboard.



Use extreme care when removing the CPU cooler because the thermal grease/tape between the CPU cooler and CPU may adhere to the CPU. Inadequately removing the CPU cooler may damage the CPU.

1-4 Installing the Memory



Read the following guidelines before you begin to install the memory:

- Make sure that the motherboard supports the memory. It is recommended that memory of the same capacity, brand, speed, and chips be used.
(Go to GIGABYTE's website for the latest supported memory speeds and memory modules.)
- Always turn off the computer and unplug the power cord from the power outlet before installing the memory to prevent hardware damage.
- Memory modules have a foolproof design. A memory module can be installed in only one direction. If you are unable to insert the memory, switch the direction.

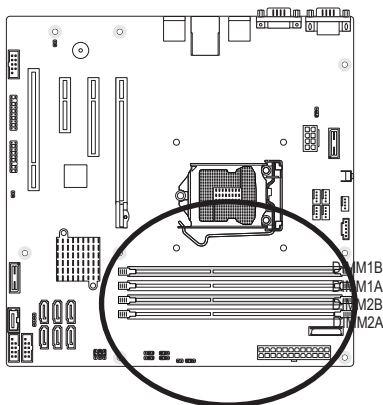
1-4-1 Dual Channel Memory Configuration

This motherboard provides four DDR3 memory sockets and supports Dual Channel Technology. After the memory is installed, the BIOS will automatically detect the specifications and capacity of the memory. Enabling Dual Channel memory mode will double the original memory bandwidth.

The four DDR3 memory sockets are divided into two channels and each channel has two memory sockets as following:

Channel A: DIMM1A, DIMM2A

Channel B: DIMM1B, DIMM2B



Total Capacity	DIMM_1B	DIMM_1A	DIMM_2B	DIMM_2A
1G		1G		
2G		1G		1G
4G	1G	1G	1G	1G
2G		2G		
4G		2G		2G
8G	2G	2G	2G	2G
4G		4G		
8G		4G		4G
16G	4G	4G	4G	4G

Due to CPU limitations, read the following guidelines before installing the memory in Dual Channel mode.

1. Dual Channel mode cannot be enabled if only one DDR3 memory module is installed.
2. When enabling Dual Channel mode with two or four memory modules, it is recommended that memory of the same capacity, brand, speed, and chips be used for optimum performance.

1-4-2 Installing a Memory



Before installing a memory module, make sure to turn off the computer and unplug the power cord from the power outlet to prevent damage to the memory module.

Be sure to install DDR3 DIMMs on this motherboard.

Installation Step:

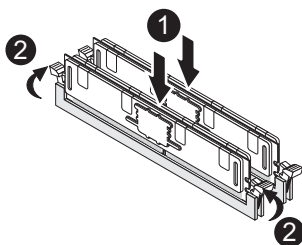
Step 1. Insert the DIMM memory module vertically into the DIMM slot, and push it down.

Step 2. Close the plastic clip at both edges of the DIMM slots to lock the DIMM module.

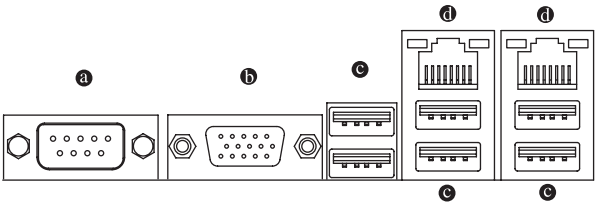
NOTE! DIMM must be populated in order starting from DIMM1A socket.

For dual-channel operation, DIMMs must be installed in matched pairs.

Step 3. Reverse the installation steps when you wish to remove the DIMM module.



1-5 Back Panel Connectors



- a Serial Port**
Connects to serial-based mouse or data processing devices.
- b Video Port**
The video in port allows connect to video in, which can also apply to video loop thru function.
- c USB 2.0/1.1 Port**
The USB port supports the USB 2.0/1.1 specification. Use this port for USB devices such as a USB key-board/mouse, USB printer, USB flash drive and etc.
- d RJ-45 LAN Port**
The Gigabit Ethernet LAN port provides Internet connection at up to 1 Gbps data rate. The following describes the states of the LAN port LEDs.
- e Line In Jack (Blue)**
The default line in jack. Use this audio jack for line in devices such as an optical drive, walkman, etc.

Connection/
Speed LED

Activity LED

LAN Port

Connection/Speed LED:

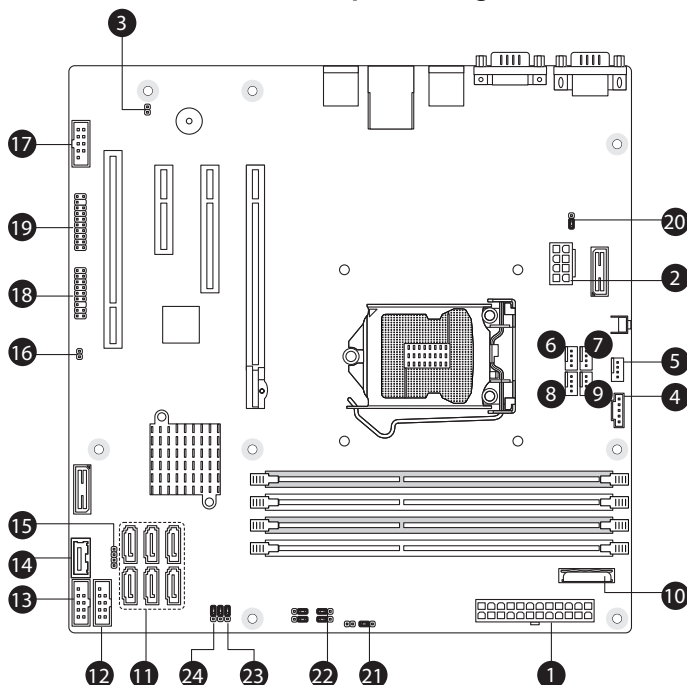
State	Description
Orange	1 Gbps data rate
Green	100 Mbps data rate
Off	10 Mbps data rate

Activity LED:

State	Description
Blinking	Data transmission or receiving is occurring
Off	No data transmission or receiving is occurring

-
- When removing the cable connected to a back panel connector, first remove the cable from your device and then remove it from the motherboard.
 - When removing the cable, pull it straight out from the connector. Do not rock it side to side to prevent an electrical short inside the cable connector.

1-6 Internal Connectors and Jumper Setting



1) P1	13) USB2
2) P2_CPU1	14) USB_A1
3) CASE_OPEN1	15) SGPIO1
4) PWR_DET1	16) HD_LED1
5) CPU_FAN (CPU Fan)	17) COM2
6) SYS_FAN1 (System Fan)	18) F_PANEL2
7) SYS_FAN2 (System Fan)	19) TPM_1
8) SYS_FAN3 (System Fan)	20) Vboot_SEL
9) SYS_FAN4 (System Fan)	21) BIOS_JP1
10) BAT1	22) ME_F_JP1
11) SATA0/1/2/3/4/5	23) PWD_JP1
12) USB1	24) CLR_CMOS1



Read the following guidelines before connecting external devices:

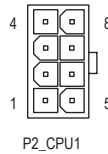
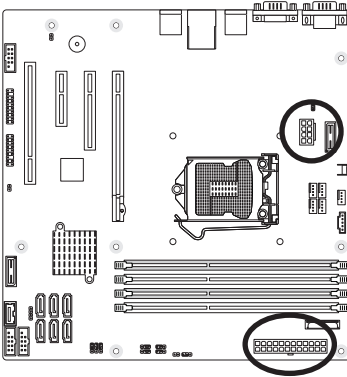
- First make sure your devices are compliant with the connectors you wish to connect.
- Before installing the devices, be sure to turn off the devices and your computer. Unplug the power cord from the power outlet to prevent damage to the devices.
- After installing the device and before turning on the computer, make sure the device cable has been securely attached to the connector on the motherboard.

1/2) P1/P2_CPU1 (2x4 12V Power Connector and 2x12 Main Power Connector)

With the use of the power connector, the power supply can supply enough stable power to all the components on the motherboard. Before connecting the power connector, first make sure the power supply is turned off and all devices are properly installed. The power connector possesses a foolproof design. Connect the power supply cable to the power connector in the correct orientation. The 12V power connector mainly supplies power to the CPU. If the 12V power connector is not connected, the computer will not start.

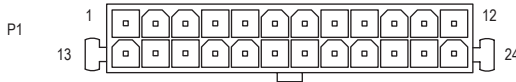


To meet expansion requirements, it is recommended that a power supply that can withstand high power consumption be used (500W or greater). If a power supply is used that does not provide the required power, the result can lead to an unstable or unbootable system.



P2_CPU1

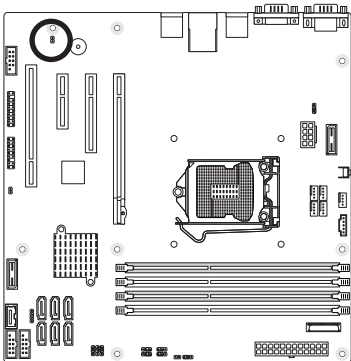
Pin No.	Definition
1	GND (Only for 2x4-pin 12V)
2	GND (Only for 2x4-pin 12V)
3	GND
4	GND
5	+12V (Only for 2x4-pin 12V)
6	+12V (Only for 2x4-pin 12V)
7	+12V
8	+12V



P1:

Pin No.	Definition	Pin No.	Definition
1	3.3V	13	3.3V
2	3.3V	14	-12V
3	GND	15	GND
4	+5V	16	PS_ON (soft On/Off)
5	GND	17	GND
6	+5V	18	GND
7	GND	19	GND
8	Power Good	20	-5V
9	5VSB (stand by +5V)	21	+5V
10	+12V	22	+5V
11	+12V (Only for 2x12-pin ATX)	23	+5V (Only for 2x12-pin ATX)
12	3.3V (Only for 2x12-pin ATX)	24	GND (Only for 2x12-pin ATX)

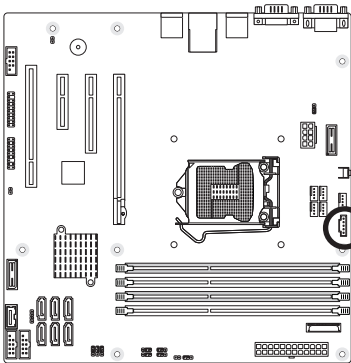
3) CASE_OPEN1 (Case Open Intrusion)



1
2

Pin No.	Definition
1	Case Open
2	GND

4) PWR_DET1 (Power management connector)

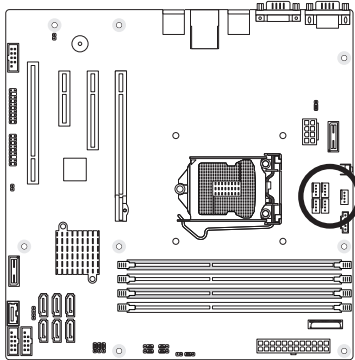


1
5

Pin No.	Definition
1	SMB CLK
2	SMB DATA
3	SMB Alert
6	GND
7	3.3V Sense

5/6/7/8/9) CPU_FAN/SYS_FAN1/2/3/4 (CPU Fan/System Fan Headers)

The motherboard has a 4-pin CPU fan header (CPU_FAN), 4 4-pin (SYS_FAN1/2/3/4) system fan headers. Most fan headers possess a foolproof insertion design. When connecting a fan cable, be sure to connect it in the correct orientation (the black connector wire is the ground wire). The motherboard supports CPU fan speed control, which requires the use of a CPU fan with fan speed control design. For optimum heat dissipation, it is recommended that a system fan be installed inside the chassis.



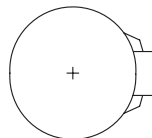
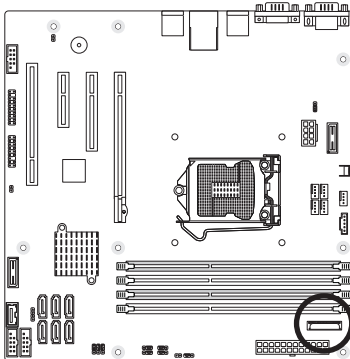
Pin No.	Definition
1	GND
2	+12V / Speed Control
3	Sense
4	Speed Control



- Be sure to connect fan cables to the fan headers to prevent your CPU and system from overheating. Overheating may result in damage to the CPU or the system may hang.
- These fan headers are not configuration jumper blocks. Do not place a jumper cap on the headers.

10) BAT (Battery)

The battery provides power to keep the values (such as BIOS configurations, date, and time information) in the CMOS when the computer is turned off. Replace the battery when the battery voltage drops to a low level, or the CMOS values may not be accurate or may be lost.



You may clear the CMOS values by removing the battery:

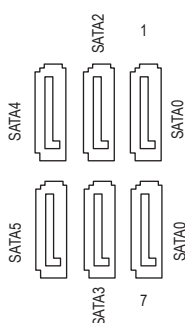
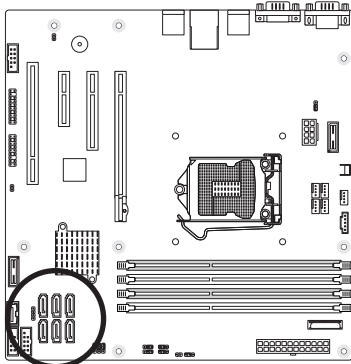
1. Turn off your computer and unplug the power cord.
2. Gently remove the battery from the battery holder and wait for one minute. (Or use a metal object like a screwdriver to touch the positive and negative terminals of the battery holder, making them short for 5 seconds.)
3. Replace the battery.
4. Plug in the power cord and restart your computer.



- Always turn off your computer and unplug the power cord before replacing the battery.
- Replace the battery with an equivalent one. Danger of explosion if the battery is replaced with an incorrect model.
- Contact the place of purchase or local dealer if you are not able to replace the battery by yourself or uncertain about the battery model.
- When installing the battery, note the orientation of the positive side (+) and the negative side (-) of the battery (the positive side should face up).
- Used batteries must be handled in accordance with local environmental regulations.

11) SATA0/1/2/3/4/5 (SATA 3Gb/s Connectors)

The SATA connectors conform to SATA 3Gb/s standard and are compatible with SATA 1.5Gb/s standard. Each SATA connector supports a single SATA device.



Pin No.	Definition
1	GND
2	TXP
3	TXN
4	GND
5	RXN
6	RXP
7	GND

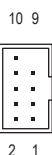
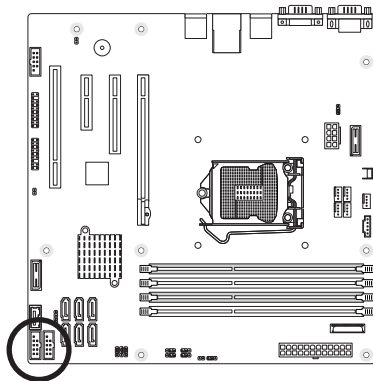


- A RAID 0 or RAID 1 configuration requires at least two hard drives. If more than two hard drives are configured, the total number of hard drives must be an even number.
- A RAID 5 configuration requires at least three hard drives. (The total number of hard drives does not have to be an even number.)
- A RAID 10 configuration requires four hard drives.

(Note) When a RAID configuration is built across the SATA 3Gb/s channels, the system performance of the RAID configuration may vary depends on the devices are connected.

12/13) USB1/UBS2 (USB Headers)

The headers conform to USB 2.0/1.1 specification. Each USB header can provide two USB ports via an optional USB bracket. For purchasing the optional USB bracket, please contact the local dealer.

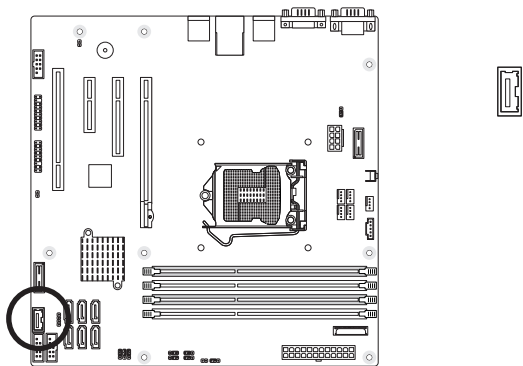


Pin No.	Definition
1	Power (5V)
2	Power (5V)
3	USB DX-
4	USB DY-
5	USB DX+
6	USB DY+
7	GND
8	GND
9	No Pin
10	OC



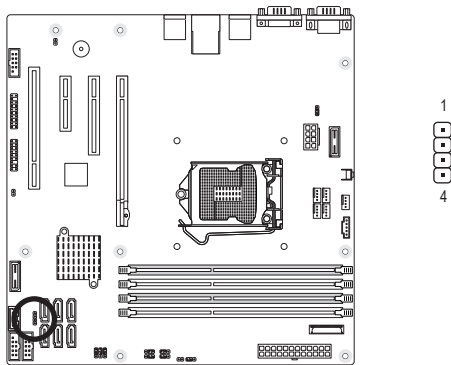
When the system is in S4/S5 mode, only the USB ports routed to the F_USB1 header can support the ON/OFF Charge function.

14) USB_A1 (Type A USB Headers)



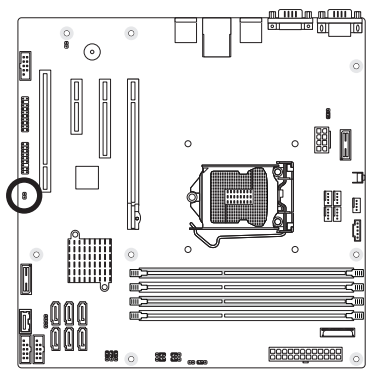
15) SGPIO1 (SGPIO Header)

SGPIO is stands for Serial General Purpose Input/Output which is a 4-signal (or 4-wire) bus used between a Host Bus Adapter (HBA) and a backplane. Out of the 4 signals, 3 are driven by the HBA and 1 is driven by the backplane. Typically, the HBA is a storage controller located inside a server, desktop, rack or workstation computer that interfaces with Hard disk drives (HDDs) to store and retrieve data.



Pin No.	Definition
1	Clock
2	Load
3	Data 0
4	Data 1

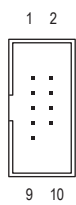
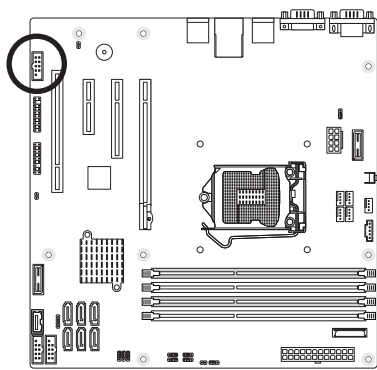
16) HD_LED1



Pin No.	Definition
1	LED Active
2	NC

17) COM2 (Serial Port Header)

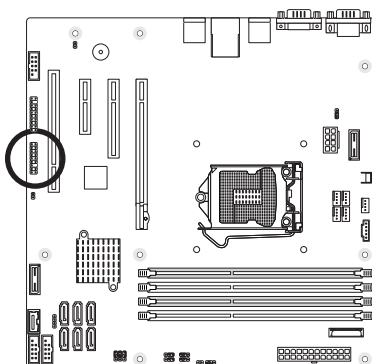
The COM header can provide one serial port via an optional COM port cable. For purchasing the optional COM port cable, please contact the local dealer.



Pin No.	Definition
1	ND CD-
2	NSIN
3	NSOUT
4	NDTR-
5	GND
6	NDSR-
7	NRTS-
8	NCTS-
9	NRI-
10	No Pin

18) F_PANEL2 (Front Panel Header)

Connect the power switch, reset switch, speaker, chassis intrusion switch/sensor and system status indicator on the chassis to this header according to the pin assignments below. Note the positive and negative pins before connecting the cables.



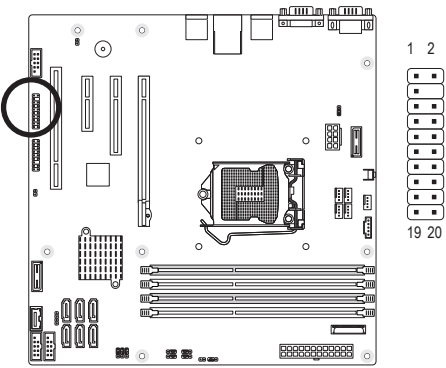
Pin No.	Signal Name	Definition
1	HD+	Hard Disk LED Signal anode (+)
2	PWR+	Power LED +
3	HD-	Hard Disk LED Signal cathode(-)
4	PWR-	Power LED Signal cathode(-)
5	NA	No Connect
6	SW+	Power Button
7	NA	No Connect
8	GND	Ground
9	LAN2-	LAN2 active LED Signal cathode(-)
10	NA	No Connect
11	LAN2+	LAN2 active LED Signal anode (+)
12	NA	No Connect
13	NA	No Connect
14	NA	No Connect
15	LAN1-	LAN1 active LED Signal cathode(-)
16	PWR+	Power LED Signal anode (+)
17	LAN1+	LAN1 active LED Signal anode (+)
18	NA	No Connect



The front panel design may differ by chassis. A front panel module mainly consists of power switch, reset switch, power LED, hard drive activity LED, speaker and etc. When connecting your chassis front panel module to this header, make sure the wire assignments and the pin assignments are matched correctly.

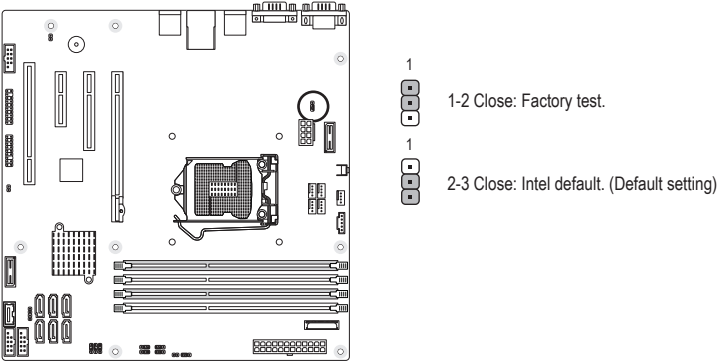
19) TPM1 (TPM Module Header)

Trusted Platform Module(TPM) Platform provides function for secure generation of cryptographic keys, the ability to limit the use of cryptographic keys, as well as a hardware pseudo-random number generator. To enable TPM function, you must connect a TPM module and configure advanced setting in BIOS Setup Menu in **Chapter 2 BIOS Setup**.

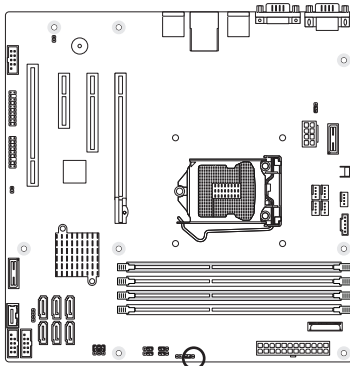


Pin No.	Definition	Pin No.	Definition
1	33MHz Clock	11	LAD 0
2	GND	11	GND
3	LFRAME#	13	NC
4	NC	14	NC
5	TPM Rest	15	3.3V AUX
6	NC	16	Serial IRQ
7	LAD3	17	GND
8	TPM Disable	18	Clock Run
9	3.3V	19	LPSPD
10	LAD 1	20	NC

20) VBoot_SEL (Core Voltage Test Jumper)



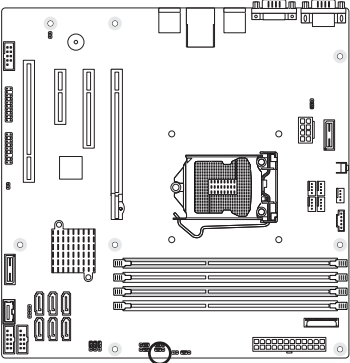
21) BIOS_JP1 (BIOS Recovery Jumper)



1 1-2 Close: Normal operation. (Default setting)

1 2-3 Close: BIOS recovery mode.

22) MFG_F_JP1 (ME Recovery Jumper)

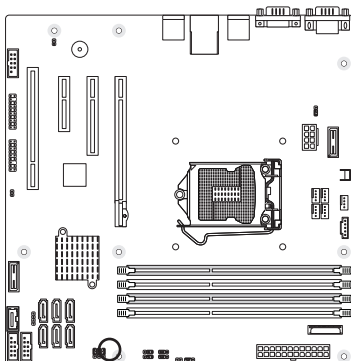


1 1-2 Close: Enable ME recovery. (Default setting)

1 2-3 Close: Disable ME recovery.

23) PWD_JP1 (Clear Password Jumper)

Use this jumper to clear the supervisor password.



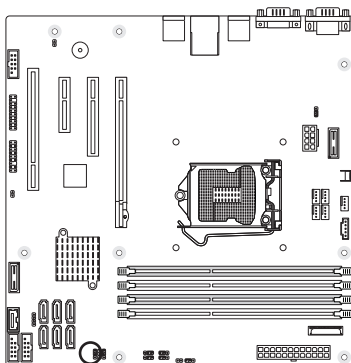
1-2 Close: Normal operation (Default setting)



2-3 Close: Clear password.

24) CLR_CMOS1 (Clearing CMOS Jumper)

Use this jumper to clear the CMOS values (e.g. date information and BIOS configurations) and reset the CMOS values to factory defaults. To clear the CMOS values, place a jumper cap on the two pins to temporarily short the two pins or use a metal object like a screwdriver to touch the two pins for a few seconds.



1-2 Close: Normal operation (Default setting)



2-3 Close: Clear CMOS data



- Always turn off your computer and unplug the power cord from the power outlet before clearing the CMOS values.
- After clearing the CMOS values and before turning on your computer, be sure to remove the jumper cap from the jumper. Failure to do so may cause damage to the motherboard.
- After system restart, go to BIOS Setup to load factory defaults (select **Load Optimized Defaults**) or manually configure the BIOS settings (refer to Chapter 2, "BIOS Setup," for BIOS configurations).

Chapter 2 BIOS Setup

BIOS (Basic Input and Output System) records hardware parameters of the system in the CMOS on the motherboard. Its major functions include conducting the Power-On Self-Test (POST) during system startup, saving system parameters and loading operating system, etc. BIOS includes a BIOS Setup program that allows the user to modify basic system configuration settings or to activate certain system features. When the power is turned off, the battery on the motherboard supplies the necessary power to the CMOS to keep the configuration values in the CMOS.

To access the BIOS Setup program, press the <F2> key during the POST when the power is turned on. To see more advanced BIOS Setup menu options, you can press <Ctrl> + <F1> in the main menu of the BIOS Setup program.



- BIOS flashing is potentially risky, if you do not encounter problems of using the current BIOS version, it is recommended that you don't flash the BIOS. To flash the BIOS, do it with caution. Inadequate BIOS flashing may result in system malfunction.
- It is recommended that you not alter the default settings (unless you need to) to prevent system instability or other unexpected results. Inadequately altering the settings may result in system's failure to boot. If this occurs, try to clear the CMOS values and reset the board to default values. (Refer to the "Load Optimized Defaults" section in this chapter or introductions of the battery/clearing CMOS jumper in Chapter 1 for how to clear the CMOS values.)

BIOS Setup Program Function Keys

<↑><↓><←><→>	Move the selection bar to select an item
<Enter>	Execute command or enter the submenu
<Esc>	Main Menu: Exit the BIOS Setup program Submenus: Exit current submenu
<Page Up>	Increase the numeric value or make changes
<Page Down>	Decrease the numeric value or make changes
<F1>	Show descriptions of the function keys
<F2>	Move cursor to the Item Help block on the right (submenus only)
<F5>	Restore the previous BIOS settings for the current submenus
<F6>	Load the Fail-Safe BIOS default settings for the current submenus
<F7>	Load the Optimized BIOS default settings for the current submenus
<F8>	Access the Q-Flash utility
<F9>	Display system information
<F10>	Save all the changes and exit the BIOS Setup program
<F11>	Save CMOS to BIOS
<F12>	Load CMOS from BIOS

■ The Functions of the <F11> and <F12> keys (For the Main Menu Only)

▶ F11: Save CMOS to BIOS

This function allows you to save the current BIOS settings to a profile. You can create up to 8 profiles (Profile 1-8) and name each profile. First enter the profile name (to erase the default profile name, use the SPACE key) and then press <Enter> to complete.

▶ F12: Load CMOS from BIOS

If your system becomes unstable and you have loaded the BIOS default settings, you can use this function to load the BIOS settings from a profile created before, without the hassles of reconfiguring the BIOS settings. First select the profile you wish to load, then press <Enter> to complete.

■ Advanced

This setup page includes all the items of AMI BIOS special enhanced features.

(ex: Auto detect fan and temperature status, automatically configure hard disk parameters.)

■ Security

Change, set, or disable supervisor and user password. Configuration supervisor password allows you to restrict access to the system and BIOS Setup.

A supervisor password allows you to make changes in BIOS Setup.

A user password only allows you to view the BIOS settings but not to make changes.

■ Server Management

Server additional features enabled/disabled setup menus.

■ Boot Options

This setup page provides items for configuration of boot sequence.

■ Boot Manager

This setup page provides configuration of boot up devices.

■ Exit

Save all the changes made in the BIOS Setup program to the CMOS and exit BIOS Setup. (Pressing <F10> can also carry out this task.)

Abandon all changes and the previous settings remain in effect. Pressing <Y> to the confirmation message will exit BIOS Setup. (Pressing <Esc> can also carry out this task.)

2-1 The Main Menu

Once you enter the BIOS Setup program, the Main Menu (as shown below) appears on the screen. Use arrow keys to move among the items and press <Enter> to accept or enter other sub-menu.

Main Menu Help

The on-screen description of a highlighted setup option is displayed on the bottom line of the Main Menu.

Submenu Help

While in a submenu, press <F1> to display a help screen (General Help) of function keys available for the menu. Press <Esc> to exit the help screen. Help for each item is in the Item Help block on the right side of the submenu.



- If you do not find the settings you want in the Main Menu or a submenu, press <Ctrl>+<F1> to access more advanced options.
- When the system is not stable as usual, select the **Load Optimized Defaults** item to set your system to its defaults.
- The BIOS Setup menus described in this chapter are for reference only and may differ by BIOS version.

BIOS Setup Utility						
Main	Advanced	Security	Server Management	Boot Options	Boot Manager	>
System BIOS				Set the date. Use <Tab>		
Version		D06		to switch between data		
Build Date		12/24/2010		lements.		
Processor						
Intel(R) Xeon(R)						
CPU E31270 @ 3.40GHz						
Core Frequency		3.40 GHz				
Count		4				
Memory				><: Select Screen		
Size		2048 MB (DDR3 1333)		v: Select Item		
System Date				Enter: Select		
System Time		[Tue 12/28/2010]		+/-: Change Opt.		
				F1: General Help		
				F3: Previous Values		
				F9: Optimized Defaults		
				F10: Save ESC: Exit		

☞ **BIOS Version**

Display version number of the BIOS setup utility.

☞ **BIOS Build Date**

Displays the date when the BIOS setup utility was created.

☞ **Processor Information:**

CPU Type / CPU Core Frequency / CPU Count

Displays the technical specifications for the installed processor.

☞ **Memory**

Determines how much total memory is present during the POST.

☞ **System Date**

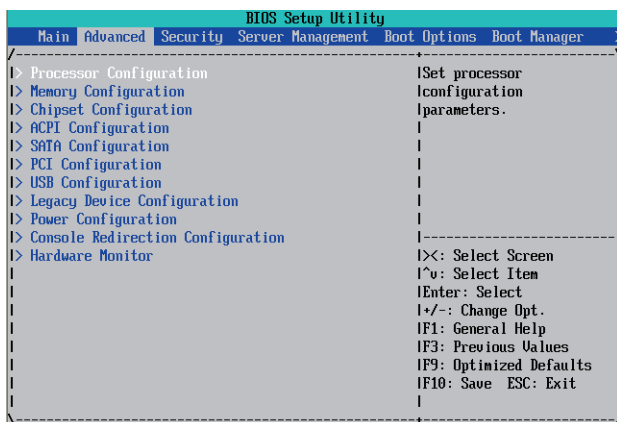
Set the date following the weekday-month-day- year format.

☞ **System Time**

Set the system time following the hour-minute- second format.

2-2 Advanced Menu

The Advanced menu display submenu options for configuring the function of various hardware components. Select a submenu item, then press Enter to access the related submenu screen.



2-2-1 Processor Configuration

BIOS Setup Utility		
Advanced		
Intel Hyper-Threading Technology	[Enabled]	^ Enable/Disable Intel Hyper-Threading Technology.
Active Processor Cores	[All]	*
Execute Disable Bit Capability	[Enabled]	*
Intel Virtualization Technology	[Disabled]	*
Intel AES-NI Support	[Disabled]	*
Intel EIST Technology	[Enabled]	* <: Select Screen
P-State Coordination	[HW_ALL]	* v: Select Item
Intel Turbo Boost Technology	[Enabled]	* Enter: Select
C1E Support	[Enabled]	* +/-: Change Opt.
CPU C3 Report	[ACPI C2]	* F1: General Help
CPU C6 Report	[Enabled]	* F3: Previous Values
Package C State Limit	[No Limit]	* F9: Optimized Defaults
Hardware Prefetcher	[Enabled]	* F10: Save ESC: Exit
		v

BIOS Setup Utility		
Advanced		
Adjacent Cache Line Prefetch	[Enabled]	^ Adjacent Cache Line Prefetch
Processor 1 Information		*
Intel(R) Xeon(R) CPU E31270 @ 3.40GHz		*
EMT64	Supported	*
Frequency	3.40 GHz	*
Core Count	4	*
CPU Stepping	206a7	*
Microcode Revision	6	* <: Select Screen
Intel HT Technology	Supported	* v: Select Item
Cache Information		* Enter: Select
L1 Instructure	32 KB	* +/-: Change Opt.
Cache per Core		* F1: General Help
L1 Data Cache per Core	32 KB	* F3: Previous Values
		* F9: Optimized Defaults
		* F10: Save ESC: Exit
		v

BIOS Setup Utility	
Advanced	
Processor 1 Information	
Intel(R) Xeon(R)	
CPU E31270 @ 3.40GHz	
EMT64	Supported
Frequency	3.40 GHz
Core Count	4
CPU Stepping	206a7
Microcode Revision	6
Intel HT Technology	Supported
Cache Information	
L1 Instructure	32 KB
Cache per Core	
L1 Data Cache per	32 KB
Core	
L2 Cache per Core	256 KB
Total L3 Cache per	8 MB
Socket	

Intel Hyper Threading Technology

The Intel Hyper Threading Technology allows a single processor to execute two or more separate threads concurrently. When hyper-threading is enabled, multi-threaded software applications can execute their threads, thereby improving performance.

Options available: Enabled/Disabled. Default setting is **Enabled**.

Active Processor Cores ^(Note)

Allows you to determine whether to enable all CPU cores.

Options available: All/1/2/3. Default setting is **All**.

Execute Disable Bit Capability

When this item enabled, the processor prevents the execution of code in data-only memory pages. This provides some protection against buffer overflow attacks.

Options available: Enabled/Disabled. Default setting is **Enabled**.

Intel Virtualization Technology

Select whether to enable the Intel Virtualization Technology function. VT allows a single platform to run multiple operating systems in independent partitions.

Options available: Enabled/Disabled. Default setting is **Disabled**.

Intel AES-NI Support (Intel Advanced Encryption Standard Instructions)

Intel Advanced Encryption Standard Instructions (AES-NI), is a symmetric block cipher that encrypts/decrypts data through several rounds. AES-NI can be used to accelerate the performance of an implementation of AES by 3 to 10x over a completely software implementation.

Options available: Enabled/Disabled. Default setting is **Disabled**.

Intel EIST Support (Enhanced Intel SpeedStep Technology)

Conventional Intel SpeedStep Technology switches both voltage and frequency in tandem between high and low levels in response to processor load.

Options available: Enabled/Disabled. Default setting is **Enabled**.

☞ **P-State Coordination**

In HW_ALL mode, the processor hardware is responsible for coordinating the P-state among logical processors dependencies. The OS is responsible for keeping the P-state request up to date on all logical processors.

In SW_ALL mode, the OS Power Manager is responsible for coordinating the P-state among logical processors with dependencies and must initiate the transition on all of those Logical Processors.

In SW_ANY mode, the OS Power Manager is responsible for coordinating the P-state among logical processors with dependencies and may initiate the transition on any of those Logical Processors.

Options available: HW_ALL/SW_ALL/SW_ANY. Default setting is **HW_ALL**.

☞ **Intel Turbo Boost Technology**

When this feature is enabled, the processor can dynamically overclock one or two of its four processing cores to improve performance with applications that are not multi-threaded or optimized for quad-core processors.

Options available: Enabled/Disabled. Default setting is **Enabled**.

☞ **C1E Support (CPU Enhanced Halt)** ^(Note)

Enables or disables Intel CPU Enhanced Halt (C1E) function, a CPU power-saving function in system halt state. When enabled, the CPU core frequency and voltage will be reduced during system halt state to decrease power consumption.

Options available: Enabled/Disabled. Default setting is **Enabled**.

☞ **CPU C3/C6 Support** ^(Note)

Allows you to determine whether to let the CPU enter C3/C6 mode in system halt state. When enabled, the CPU core frequency and voltage will be reduced during system halt state to decrease power consumption. The C3/C6 state is a more enhanced power-saving state than C1. **Auto** lets the BIOS automatically configure this setting.

Options available for CPU C3 Report: ACPI C2/ACPI C3/Disabled. Default setting is **ACPI C2**.

Options available for CPU C6 Report: Enabled/Disabled. Default setting is **Enabled**.

☞ **Package C State Limit**

Configure state for the C-State package limit.

Options available: C0/C1/C6/C7/No Limit. Default setting is **No Limit**.

☞ **Hardware Prefetcher**

Select whether to enable the speculative prefetch unit of the processor.

Options available: Enabled/Disabled. Default setting is **Enabled**.

☞ **Adjacent Cache Line Prefetch**

When enabled, cache lines are fetched in pairs. When disabled, only the required cache line is fetched.

Options available: Enabled/Disabled. Default setting is **Enabled**.

☞ **CPU Speed**

The processor speed is the speed at which a microprocessor executes instructions. Clock speeds are expressed in megahertz (MHz), with 1 MHz being equal to 1 million cycles per second. The faster the clock, the more instructions the CPU can execute per second.

☞ **EMT64**

Displays Processor EMT64 support status

(Note) This item is present only if you install a CPU that supports this feature. For more information about Intel CPUs' unique features, please visit Intel's website.

☞ **Core Count**

Displays Processor core count information.

☞ **CPU Stepping**

Display processor stepping information.

☞ **Microcode Revision**

Display Microcode Revision.

☞ **Intel HT Technology**

Display Intel Hyper Threading Technology function support information.

2-2-2 Memory Configuration

BIOS Setup Utility		
Advanced		
Available Memory	2048 MB	
Memory Type	DDR3 1333	
Memory Reset	[No]	
DIMM Information		
DIMM #1	2048 MB, 1333 MHz	
DIMM #2	Not Installed	
DIMM #3	Not Installed	
DIMM #4	Not Installed	
		l><: Select Screen
		l^v: Select Item
		lEnter: Select
		l+/-: Change Opt.
		lF1: General Help
		lF3: Previous Values
		lF9: Optimized Defaults
		lF10: Save ESC: Exit

🔗 **Available Memory**

Total size of system memory detected during POST.

🔗 **Memory Type**

Display information of installed memory type.

🔗 **Memory Reset**

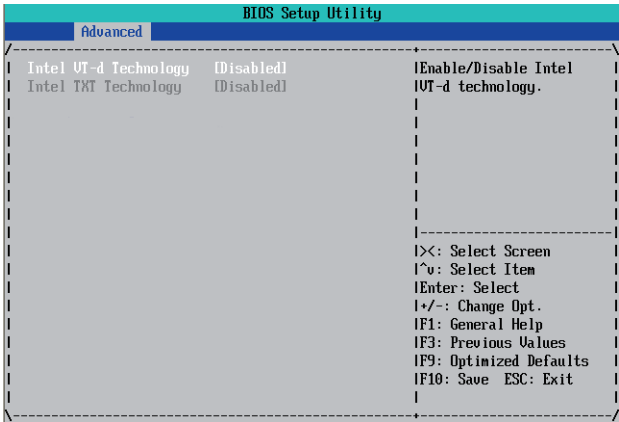
Select whether to delete the historical memory data log. System memory will be retested on the next boot-up.

Options available: Yes/No. Default setting is **No**.

🔗 **DIMM Group #1/2/3/4 Status**

The size of memory installed on each of the DDR3 slots.

2-2-3 Advanced Chipset Configuration



☞ Intel VT-d Technology

Enable/Disable Intel VT-d Technology function.

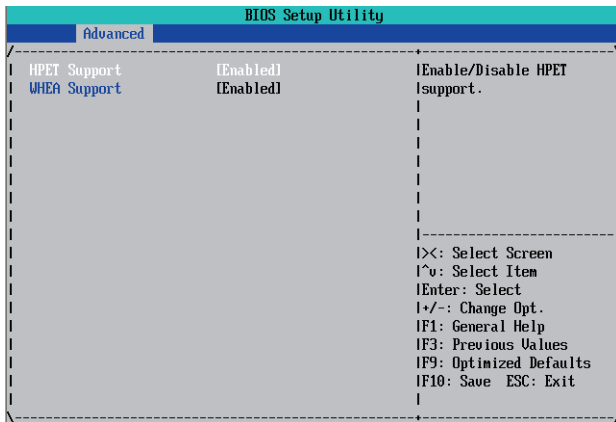
Options available: Enabled/Disabled. Default setting is **Disabled**.

☞ Intel TXT Technology

Enable/Disable Intel TXT Technology function.

Options available: Enabled/Disabled. Default setting is **Disabled**.

2-2-4 ACPI Configuration



 HPET Support (High Precision Event Timer)

Enable/Disable HPET Support.

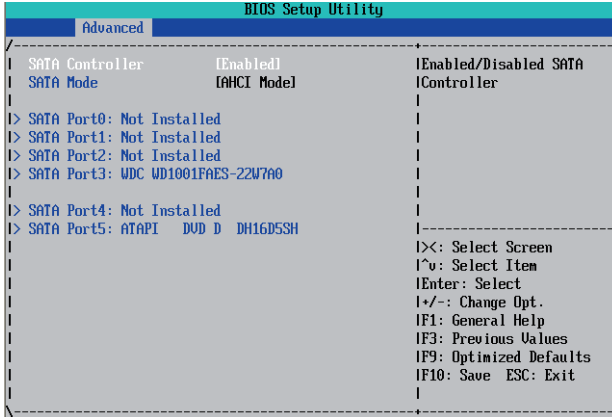
Options available: Enabled/Disabled. Default setting is **Enabled**.

☞ WHEA Support (Windows Hardware Error Architecture)

Enable/Disable WHEA Support.

Options available: Enabled/Disabled. Default setting is **Enabled**.

2-2-5 SATA Controller Configuration



☞ SATA Controller

When enabled, the SATA controller will function normally.

Options available: Enabled/Disabled. Default setting is **Enabled**.

☞ SATA Mode

Select the on chip SATA type.

IDE Mode: When set to IDE, the SATA controller disables its RAID and AHCI functions and runs in the IDE emulation mode. This is not allowed to access RAID setup utility.

RAID Mode: When set to RAID, the SATA controller enables both its RAID and AHCI functions. You will be allowed access the RAID setup utility at boot time.

AHCI Mode: When set to AHCI, the SATA controller enables its AHCI functionality. Then the RAID function is disabled and cannot be access the RAID setup utility at boot time.

Options available: IDE/RAID/AHCI. Default setting is **AHCI Mode**.

☞ SATA Port 0/1/2/3/4/5

Displays the installed HDD devices.

2-2-6 PCI Configuration

BIOS Setup Utility		
Advanced		
PERR# Generation	[Enabled]	^IEnable/Disable PERR#
SERR# Generation	[Enabled]	*Igeneration.
PCI Express Slot #1	[Enabled]	*I
I/O ROM		*I
PCI Express Slot #2	[Enabled]	*I
I/O ROM		*I
PCI Express Slot #3	[Enabled]	*I
I/O ROM		*I
PCI Express Slot #4	[Enabled]	*I
I/O ROM		*I<>: Select Screen
Onboard Graphics	[Enabled]	*I^v: Select Item
Controller		*IEnter: Select
Primary Graphics	[Add-On]	*I+/-: Change Opt.
Onboard LAN1	[Enabled]	*IF1: General Help
Controller		*IF3: Previous Values
Onboard LAN1 I/O ROM	[Disabled]	*IF9: Optimized Defaults
		*IF10: Save ESC: Exit
		vI

BIOS Setup Utility		
Advanced		
PCI Express Slot #2	[Enabled]	^IChoose a mode for PCI
I/O ROM		-IROM priority.
PCI Express Slot #3	[Enabled]	+IIn case of multiple
I/O ROM		+IOption ROMs (Legacy and
PCI Express Slot #4	[Enabled]	+IEFI Compatible),
I/O ROM		*Ispecifies what PCI
Onboard Graphics	[Enabled]	*IOption ROM to launch.
Controller		*I
Primary Graphics	[Add-On]	*I
Onboard LAN1	[Enabled]	*I<>: Select Screen
Controller		*I^v: Select Item
Onboard LAN1 I/O ROM	[Disabled]	*IEnter: Select
Onboard LAN I/O ROM	[PXE]	*I+/-: Change Opt.
Option		*IF1: General Help
PCI ROM Priority	[EFI Compatible ROM]	*IF3: Previous Values
		*IF9: Optimized Defaults
		*IF10: Save ESC: Exit
		vI

⌘ PERR# Generation

When this item is set to enabled, PCI bus system error (SERR) is generated and is routed to NMI. Options available: Enabled/Disabled. Default setting is **Enabled**.

⌘ SERR# Generation

When this item is set to enabled, PCI bus parity error (PERR) is generated and is routed to NMI. Options available: Enabled/Disabled. Default setting is **Enabled**.

⌘ PCI Express Slot 1/2/3/4 I/O ROM

When enabled, This setting will initialize the device expansion ROM for the related PCI-E slot. Options available: Enabled/Disabled. Default setting is **Enabled**.

☞ **Onboard Graphics Controller**

When enabled, the graphic controller will function normally.

Options available: enabled/Disabled. Default setting is **Enabled**.

☞ **Primary Graphics**

Select the primary video device that the BIOS will use for output.

Options available: Add-On/Onboard. Default setting is **Add-On**.

☞ **Onboard LAN1 Controller**

When enabled, the system will enable the onboard LAN devices.

Options available: enabled/Disabled. Default setting is **Enabled**.

☞ **Onboard LAN1 I/O ROM**

Select whether to enable the selected onboard LAN device. When enabled, device expansion ROM will be initialized.

Options available: enabled/Disabled. Default setting is **Disabled**.

☞ **Onboard LAN1 I/O ROM Option**

Select whether to enable the selected onboard LAN device. When enabled, device expansion ROM will be initialized.

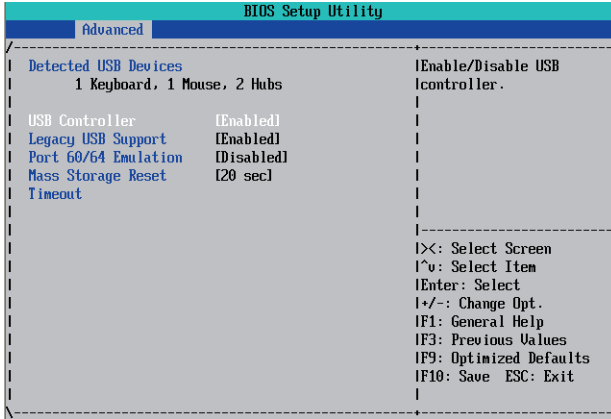
Options available: PXE/iSCSI. Default setting is **PXE**.

☞ **PCI ROM Priority**

In case of multiple Option ROMs (Legacy and EFI Compatible) specifies what PCI option ROM to launch.

Options available: Legacy ROM/EFI Compatible ROM. Default setting is **EFI Compatible ROM**.

2-2-7 USB Configuration



☞ Detected USB Devices

Displays the information of installed USB devices in the system.

☞ USB Controller

When enabled, the USB controller will function normally.

Options available: Enabled/Disabled. Default setting is **Enabled**.

☞ Legacy USB Support

Enables or disables support for legacy USB devices.

Options available: Enabled/Disabled. Default setting is **Enabled**.

☞ Port 60/64 Emulation

Enable I/O port 60h/64h emulation support. This should be enabled for the complete USB Keyboard Legacy support for non-USB aware OS.

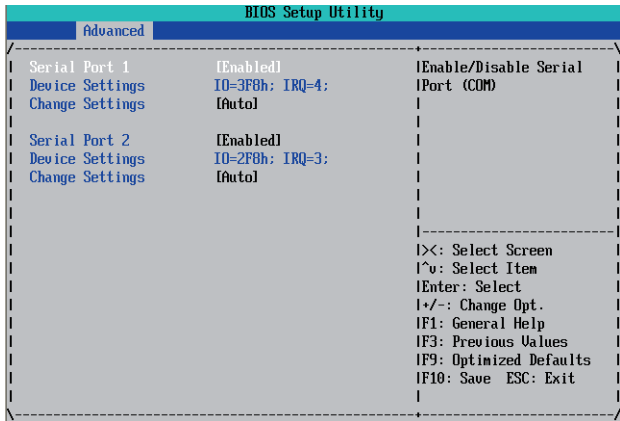
Options available: Enabled/Disabled. Default setting is **Disabled**.

☞ Mass Storage Reset Timeout

Define USB Mass Storage Device Start Unit command timeout.

Options available: 10 sec/20sec/30sec/40sec.

2-2-8 Legacy Device Configuration



Serial Port 1/2

When enabled allows you to configure the serial port settings. When set to Disabled, displays no configuration for the serial port.

Options available: Enabled/Disabled. Default setting is **Enabled**.

Device Settings

Displays Serial Port 1/2 device setting information.

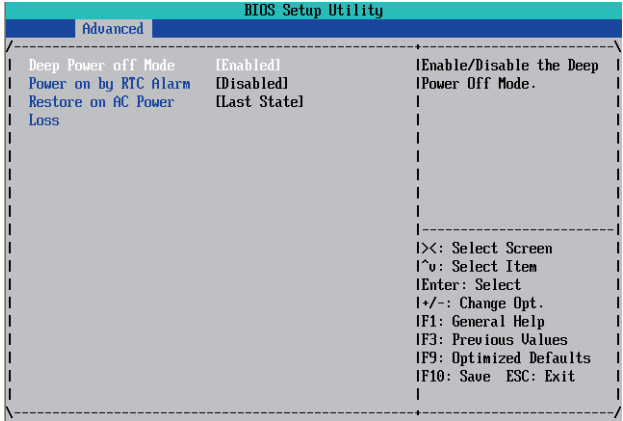
Change Settings

Change Serial Port 1/2 device settings. When set to Auto allows the server's BIOS or OS to select a configuration.

Options available: Auto/IO=3F8; IRQ=4/IO=3F8h; IRQ=3,4,5,6,7,10,11,12/

IO=2F8h; IRQ=3,4,5,6,7,10,11,12 /IO=3E8h; IRQ=3,4,5,6,7,10,11,12/IO=2E8h; IRQ=3,4,5,6,7,10,11,12.

2-2-9 Power Configuration



⏏ Deep Power Off Mode

Enable or Disable Deep Power Off Mode.

Options available: Enabled/Disabled. Default setting is **Enabled**.

⏏ Power On by RTC Alarm

Select whether to wake up the system when an RTC alarm is detected.

Options available: Enabled/Disabled. Default setting is **Disabled**.

⏏ Restore on AC Power Loss

Defines the power state to resume to after a system shutdown that is due to an interruption in AC power. When set to Last State, the system will return to the active power state prior to shutdown. When set to Stay Off, the system remains off after power shutdown.

Options available: Last State/Stay Off/Power On. Default setting is **Last State**.

2-2-10 Console Redirection

BIOS Setup Utility		
Advanced		
Console Redirection	[Serial Port 1]	The settings specify how the host computer and the remote computer (which the user is using) will exchange data. Both computers should have the same or compatible settings.
Terminal Type	[VT100]	
Bits per Second	[19200]	
Data Bits	[8]	
Parity	[None]	
Stop Bits	[1]	
Flow Control	[None]	
Recorder Mode	[Disabled]	
Resolution 100x31	[Disabled]	
Legacy OS	[80x24]	
Redirection		----- ><: Select Screen <u>: Select Item Enter: Select +/-: Change Opt. F1: General Help F3: Previous Values F9: Optimized Defaults F10: Save ESC: Exit
Resolution		

Console Redirection ^(Note)

Select whether to enable console redirection. Console redirection enables users to manage the system from a remote location.

Options available: Serial Port1/Serail Port2/Disabled. Default setting is **Disabled**.

Terminal Type

Select a terminal type to be used for console redirection.

Options available: VT100/VT100+/ANSI /VT-UTF8.

Bits per second

Select the baud rate for console redirection.

Options available: 9600/19200/57600/115200.

Parity

A parity bit can be sent with the data bits to detect some transmission errors.

Even: parity bit is 0 if the num of 1's in the data bits is even.

Odd: parity bit is 0 if num of 1's the data bits is odd.

Mark: parity bit is always 1. Space: Parity bit is always 0.

Mark and Space Parity do not allow for error detection.

Options available: None/Even/Odd/Mark/Space.

Stop Bits

Stop bits indicate the end of a serial data packet. (A start bit indicates the beginning). The standard setting is 1 stop bit. Communication with slow devices may require more than 1 stop bit.

Options available: 1/2.

Flow Control

Flow control can prevent data loss from buffer overflow. When sending data, if the receiving buffers are full, a 'stop' signal can be sent to stop the data flow. Once the buffers are empty, a 'start' signal can be sent to re-start the flow. Hardware flow control uses two wires to send start/stop signals.

Options available: None/Hardware RTS/CTS.

(Note) Advanced items prompt when this item is defined.

Recorder Mode

When this mode enabled, only text will be send. This is to capture Terminal data.

Options available: Enabled/Disabled.

Resolution 100x31

Enables or disables extended terminal resolution.

Options available: Enabled/Disabled.

Legacy OS Redirection Resolution

On Legacy OS, the number of Rows and Columns supported redirection.

Options available: 80x24/80X25.

2-2-11 Hardware Monitor

Press Enter to view the Hardware Monitor screen which displays a real-time record of the CPU/system temperature, fan speed, and voltage. Items on this window are non-configurable.

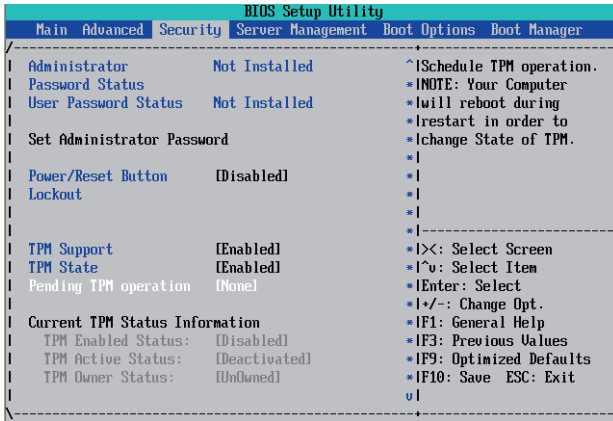
BIOS Setup Utility		
Advanced		
System Health		
CPU Temperature	+52 C	
Slot Temperature	-55 C	
FP Temperature	-55 C	
Fan 1 Speed	2700 RPM	
Fan 2 Speed	N/A	
Fan 3 Speed	2343 RPM	
P_VCC_CPU	+1.21 U	
P_1V5_VDDQ	+1.50 U	
P12V	+11.86 U	
P5V	+4.99 U	
P3V3	+3.36 U	
P_1V8	+1.82 U	
P_1V05_PCH	+1.04 U	
VBAT	+3.120 U	

		[<: Select Screen
		[v: Select Item
		[Enter: Select
		[+/-: Change Opt.
		[F1: General Help
		[F3: Previous Values
		[F9: Optimized Defaults
		[F10: Save ESC: Exit

- ☞ **Current CPU/Slot/FP Temperature**
Displays current bus CPU/Slot/FP temperature.
- ☞ **Current FAN 1/2/3 Speed (RPM)**
Displays current CPU/system fan speed.
- ☞ **Current Voltage(V) P_VCC_CPU/P_1V5_VDDQ/P12V/P5V/P3V3/P1V8/P1V05_PCH/VBAT**
Displays the current CPU and system voltages.

2-3 Security Menu

The Security menu allows you to safeguard and protect the system from unauthorized use by setting up access passwords.



There are two types of passwords that you can set:

- Administrator Password

Entering this password will allow the user to access and change all settings in the Setup Utility.

- User Password

Entering this password will restrict a user's access to the Setup menus. To enable or disable this field, a Administrator Password must first be set. A user can only access and modify the System Time, System Date, and Set User Password fields.

Administrator Password Status

This parameter indicates whether a Administrator Password has been assigned.

User Password Status

This parameter indicates whether a user password has been assigned.

To clear the password, press <Enter> on the password item and when requested for the password, press <Enter> again. The message "PASSWORD DISABLED" will appear, indicating the password has been cancelled.

Set Administrator Password

Press Enter to configure the Administrator password.

Set User Password

Press Enter to configure the user password.

Power/Reset Button Lockout

Enable or disable Power Button Lockout.

Options available: Enabled/Disabled. Default setting is **Disabled**.

Power/Reset Button Lockout

Enable or disable Power Button Lockout.

Options available: Enabled/Disabled. Default setting is **Disabled**.

TPM Support

Select Enabled to activate TPM support feature.

Options available: Enabled/Disabled. Default setting is **Enabled**.

TPM State

Select Enabled to activate TPM State function.

Options available: Enabled/Disabled. Default setting is **Enabled**.

Pending TPM Support

Schedule TPM operation.

Options available: None/Enable Take Ownership.

Current TPM Status Information

Display current TPM status information.

Setting a System Password

1. Use the up/down keys to select a password parameter (Set Administrator Password or Set User Password), then press **Enter**.
A password box will appear.
2. Type a password then press Enter.
3. The password may consist of up to eight alphanumeric characters (A-Z, a-z, 0-9).
4. Retype the password to verify the first entry then press Enter again.
5. Press F10. 5. Select Yes to save the new password and close the Setup Utility.

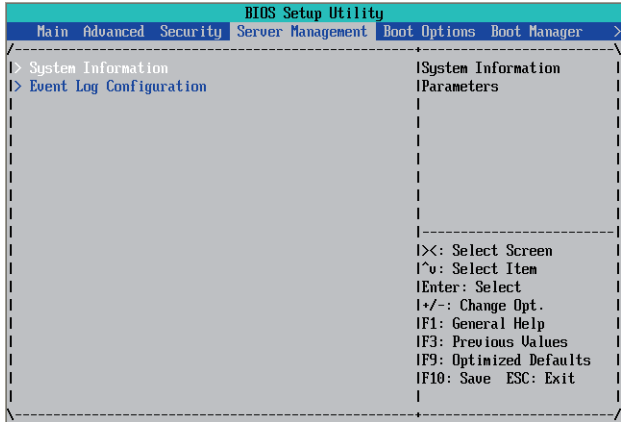
Changing a System Password

1. Use the up/down keys to select a password parameter (Set Administrator Password or Set User Password), then press **Enter**.
2. Type the original password then press **Enter**.
3. Type a new password then press **Enter**.
4. Retype the password to verify the first entry then press **Enter** again.
5. Press **F10**.
6. Select Yes to save the modified password and close the Setup Utility.

Removing a System Password

1. Use the up/down keys to select a password parameter (Set Administrator Password or Set User Password), then press **Enter**.
2. Enter the current password then press **Enter**.
3. Press Enter twice without entering anything in the new and confirm password fields. After doing this, the system automatically sets the related password parameter to **Clear**.

2-4 Server Management Menu



☞ **System Information**

Displays basic system ID information, as well as BIOS version. Press Enter to access the related submenu.

☞ **Event Log Configuration**

Displays Event Log advanced settings. Press Enter to access the related submenu.

2-4-1 System Information

The System Management submenu is a simple display page for basic system ID information, as well as System product information. Items on this window are non-configurable.

BIOS Setup Utility		
Server Management		
System Product Name	6U8SL1	
System Serial Number		
Base Board Product Name	6U8SL1	
Base Board Serial Number		
UUID	FFFFFFFFFFFFFFFF FFFFFFFFFFFFFFFF	
NIC1 MAC Address	1C-6F-65-3E-32-6A	<>: Select Screen ~: Select Item Enter: Select +/-: Change Opt. F1: General Help F3: Previous Values F9: Optimized Defaults F10: Save ESC: Exit
	-	

2-4-2 Event Log Configuration

BIOS Setup Utility		
Server Management		
> Change SMBIOS Event Log Settings		Press <Enter> to change
View Smbios Event Log		the Smbios Event Log
		configuration.

		><: Select Screen
		^v: Select Item
		Enter: Select
		+/-: Change Opt.
		F1: General Help
		F3: Previous Values
		F9: Optimized Defaults
		F10: Save ESC: Exit

BIOS Setup Utility		
Server Management		
Erase Event Log	[No]	Choose options for
When Log Is Full	[Do Nothing]	erasing Smbios Event
		Log. Erasing is done
Multiple Event Count	1	prior to any logging
Increment		activation during reset.
Multiple Event Time	60	
Window		
Log OEM Codes	[Enabled]	
Convert OEM Codes	[Disabled]	-----
		><: Select Screen
		^v: Select Item
		Enter: Select
		+/-: Change Opt.
		F1: General Help
		F3: Previous Values
		F9: Optimized Defaults
		F10: Save ESC: Exit

BIOS Setup Utility				
Server Management				
> Change SMBIOS Event Log Settings ^IPress <Enter> to change *Ithe Smbios Event Log *Iconfiguration.				
View Smbios Event Log				
DATE	TIME	ERROR CODE	SEVE...	
12/24/10	09:38:55	Smbios 0x16	N/A	
12/24/10	09:38:55	Smbios 0x17	N/A	
12/24/10	09:38:56	Smbios 0xE3	N/A	
12/24/10	09:38:57	Smbios 0xE3	N/A	
12/24/10	09:39:04	Smbios 0x17	N/A	
12/24/10	09:39:58	Smbios 0x17	N/A	+IX: Select Screen
12/24/10	09:39:59	Smbios 0xE3	N/A	+I^o: Select Item
12/24/10	09:39:59	Smbios 0xE3	N/A	+IEnter: Select
12/24/10	09:40:58	Smbios 0x17	N/A	+I+/-: Change Opt.
12/24/10	09:42:04	EFI 03058004	Major	+IFI: General Help
12/24/10	09:42:22	Smbios 0x17	N/A	+IFI3: Previous Values
12/24/10	09:43:15	Smbios 0x17	N/A	+IFI9: Optimized Defaults
12/24/10	09:43:45	Smbios 0x17	N/A	+IFI10: Save ESC: Exit
12/24/10	09:47:24	Smbios 0x17	N/A	uI

Change SMBIOS Event Settings

Press Enter to access the related submenu.

View Smbios Event Log

Displays Smbios Event Log . Press Enter to View Smbios Event Log.

Erase Event Log

Choose options for erasing Smbios Event Log Erasing is done prior to any logging activation during reset.

Options available: No/Yes, next reset/Yes, every reset.

When Log is Full

Choose options for reactions to a full Smbios Event Log.

Options available: Do Nothing/Erase immediately.

Multi Event Count Increment

Displays information of Multi Event Count Increment.

Log OEM Codes

Enable or Disable the logging of EFI Status Codes as OEM Codes.

Options available: Enabled/Disabled.

Convert OEM Codes

Enable or disable the converting of EFI Status Codes to Standard Smbios Types.

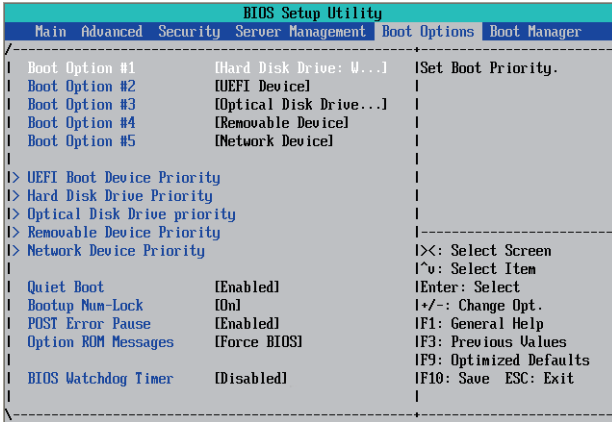
Options available: Enabled/Disabled.



- All values changed here do not take action until computer is restarted.

2-5 Boot Option Menu

The Boot menu allows you to set the drive priority during system boot-up. BIOS setup will display an error message if the drive(s) specified is not bootable.



By default, the server searches for boot devices in the following order:

1. Hard drive.
2. UEFI device.
3. Optical disc drive.
4. Removable device.

UEFI Boot Device Priority

Press Enter to configure the boot priority.

Hard Disk Drive Priority

Press Enter to configure the boot priority.

Optical Disk Drive Priority

Press Enter to configure the boot priority.

Removable Disk Drive Priority

Press Enter to configure the boot priority.

Network Device Priority

Press Enter to configure the boot priority.

Quiet Boot

Enables or disables the quick boot function to speed up the system boot-up process to shorten the waiting time for entering the operating system and to deliver greater efficiency for daily use.

Options available: Enabled/Disabled. Default setting is **Enabled**.

Bootup NumLock

Enable or Disable Bootup NumLock function.

Options available: On/Off. Default setting is **On**.

POST Error Pause

Select whether to pause POST when a boot-up error is detected.

Options available: Enabled/Disabled. Default setting is **Enabled**.

☞ **POST Error Pause**

Select whether to pause POST when a boot-up error is detected.

Options available: Enabled/Disabled. Default setting is **Enabled**.

☞ **Option ROM Messages**

Set display mode for Option ROM.

Options available: Force BIOS/Keep Current . Default setting is **Force BIOS**.

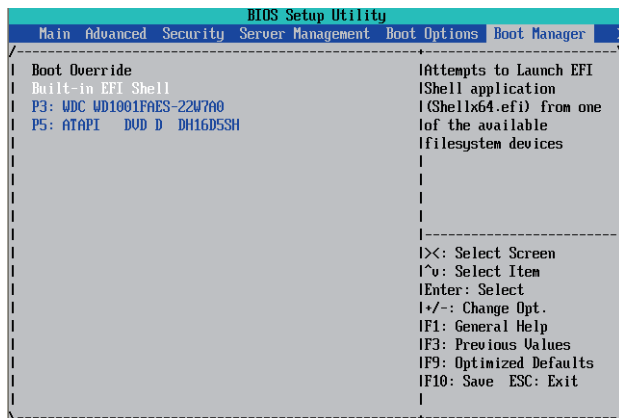
☞ **BIOS Watch Timer**

Enable/Disable BIOS Watch Timing function.

Options available: Enabled/Disabled. Default setting is **Disabled**.

2-6 Boot Manager

The Boot manager menu allows you to specify the boot-up drive. BIOS setup will display an error message if the drive(s) specified is not bootable.



☞ Built-in EFI Shell

Press Enter to configure the device as the boot-up drive.

☞ P3: WDC WD1001FAES-22W7A0

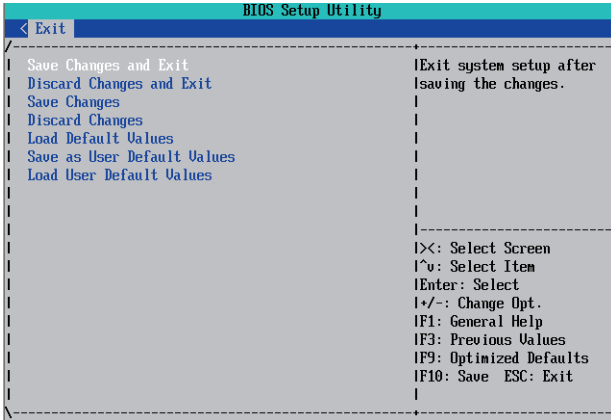
Press Enter to configure the device as the boot-up drive.

☞ P5: ATAPI DVD D DH16D5SH

Press Enter to configure the device as the boot-up drive.

2-7 Exit Menu

The Exit menu displays the various options to quit from the BIOS setup. Highlight any of the exit options then press **Enter**.



☞ Save Changes and Exit

Saves changes made and close the BIOS setup.

Options available: Yes/No.

☞ Discard Changes and Exit

Discards changes made and close the BIOS setup.

Options available: Yes/No.

☞ Save Changes

Saves changes made in the BIOS setup.

Options available: Yes/No.

☞ Discard Changes

Discards all changes made in the BIOS setup.

Options available: Yes/No.

☞ Load Default Values

Loads the default settings for all BIOS setup parameters. Setup Defaults are quite demanding in terms of resources consumption. If you are using low-speed memory chips or other kinds of low-performance components and you choose to load these settings, the system might not function properly.

Options available: Yes/No.

☞ Save as User Default Values

Saves as user default and close the BIOS setup.

Options available: Yes/No.

☞ Load User Default Values

Loads the user default settings for all BIOS setup parameters.

Options available: Yes/No.